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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,554	11/21/2003	Osamu Nishimura	245874US2SRD	8475
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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
			EXAMINER	
			KURR, JASON RICHARD	
			ART UNIT	PAPER NUMBER
			2615	
			NOTIFICATION DATE	DELIVERY MODE
			07/20/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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**Office Action Summary**

Application No.

10/717,554

Applicant(s)

NISHIMURA ET AL.

Examiner

Jason R. Kurr

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/21/03 11/22/06</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: control unit #20 and arm #11b as described on page 10 of the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Claim Objections*

Claims 1-8 are objected to because of the following informalities:

With respect to claims 1 and 5, the claims lack indefinite articles (i.e. "a" or "an") to combine with the nouns of the phrases. For example, Claim 1 should read "a direct object sound measuring device ..." and "an object sound control device ...".

With respect to dependent claims 2-4 and 6-8, the claims disclose "**An** active diffracted ...". The claims should read "**The** active diffracted ...".

Claim 1 recites the limitation "the object sound source area side of a wall body" in lines 4 and 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the object sound source area" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the object sound information" in lines 7 and 8. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the object sound" in line 15. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the object sound measuring device" in lines 18 and 19. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the direct object sound measuring point" in lines 22 and 23. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the object sound source" in line 23. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the direct object sound measuring point for the control sound source" in lines 26 and 27. There is insufficient antecedent basis for this limitation in the claim.

Claim 2 recites the limitation "the object sound source measuring device" in lines 7 and 8. There is insufficient antecedent basis for this limitation in the claim.

Claim 2 recites the limitation "the direct sound measuring device" in lines 8 and 9. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "that part of a wall body" in lines 26 and 27. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "the controlled sound information" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "the part of the opening" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "the controlled sound" in line 11. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "the controlled sound measuring device" in line 16. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "the controlled sound source" in line 19. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "the direct controlled sound measuring position" in line 20. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "the controlled sound source measuring device" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "the direct sound measuring device" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 9 and 12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 9 and 12 contain the limitation "a sound source measuring the controlled sound information". It is unclear to the Examiner as to how a source of sound is capable of measuring sound information. Sources of sound are known to emit or transmit sound, they are not intended to measure sound. The specification does not describe how a sound source is able to accomplish "measuring the controlled sound information". It is understood that sound receivers, such as microphones, are capable of measuring sound.

Claims 9 and 12 contain the limitation "a direct controlled sound measuring the controlled sound information". It is unclear to the Examiner as to how a sound is capable of measuring sound information. Sound is not a physical element capable of measuring acoustic pressure waves. The specification does not describe how "sound" is capable of accomplishing the claimed function of measuring sound information.

Claims 9 and 12 contain the limitation "a control sound generating a control sound". It is unclear to the Examiner as to how a control sound is capable of generating a control sound. The specification does not describe how a sound generates a sound.

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It is understood that control circuits may generate an electrical sound signal to be reproduced by a loudspeaker as an acoustic sound, however this is not what is claimed.

Claims 9 and 12 contain the limitation "a controlled sound controlling the output of the control sound". Once again it is unclear to the Examiner as to how a sound is capable of controlling another sound in light of the specification.

Claim 12 contains the limitations "a first/second sound transmission characteristic measuring a first/second sound transmission characteristic". It is unclear to the Examiner as to how a transmission characteristic is capable of measuring another transmission characteristic. A transmission characteristic is not a physical element capable of measuring. The specification does not describe how "a transmission characteristic" is capable of accomplishing the claimed function of measuring a transmission characteristic.

In light of the above USC 112 1<sup>st</sup> paragraph rejections above, the Examiner was not able to perform an analysis of claims 9-14 in view of prior art.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamashita et al (US 6,483,926 B1).

With respect to claim 1, Yamashita discloses an active diffracted sound control apparatus comprising: sound source measuring device (fig.1,2 #1) arranged on the object sound source area side of a wall body (fig.2 #23) arranged between the object sound source area (fig.2 "upper story") and a sound receiving area (fig.2 "lower story") for measuring the object sound information in the neighborhood of the wall body (col.2 ln.23-29); direct object sound measuring device (fig.2 #10) arranged on the sound receiving area side of the wall body for measuring the object sound information in the neighborhood of the wall body (col.4 ln.19-30); a control sound source (fig.1,2 #9) arranged in the neighborhood of the wall body for generating a control sound to reduce the object sound at a virtual object sound measuring point in the sound receiving area (col.4 ln.6-19); and object sound control device (fig.2 #12) for controlling the output of the control sound based on the output of the object sound measuring device (col.5 ln.47-57); wherein the object sound control device is operated on the basis of a first sound transmission characteristic between the direct object sound measuring point for the object sound source and the virtual object sound measuring point (col.4 ln.19-30) and a second sound transmission characteristic between the direct object sound measuring point for the control sound source and the virtual object sound measuring point (col.4 ln.64-67, col.5 ln.1-28).



With respect to claim 2, Yamashita discloses an active diffracted sound control apparatus according to claim 1, wherein the object sound control device alternates between a control section for generating the control sound and an identification section for obtaining a third sound transmission characteristic between the object sound source measuring device and the direct sound measuring device (fig.1 #5, col.4 ln.6-19).

With respect to claim 3, Yamashita discloses an active diffracted sound control apparatus according to claim 1, wherein the sound source measuring device, the direct object sound measuring device and the control sound source are configured integrally and installed removably on the wall body. It is implied that the components of Yamashita are installed after the construction of floor and ceiling (#20,23) and so they would be capable of being removed from their mounted positions.

With respect to claim 4, Yamashita discloses an active diffracted sound control apparatus according to claim 1, wherein the control sound source is arranged at the upper end portion of the wall body (fig.2), and wherein the direct object sound measuring device is arranged within the distance of the shortest wavelength of the frequency of the object sound from the upper end portion of the wall body (col.4 ln.59-67, col.5 ln.1-3).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita et al (US 6,483,926 B1) in view of Shepherd et al (US 5,024,288).

With respect to claim 5, Yamashita discloses an active diffracted sound controller comprising: sound source measuring device (fig.1,2 #1) arranged on that part of a wall body (fig.2 #23) between a controlled sound source area (fig.2 "upper story") and a sound receiving area (fig.2 "lower story") which is nearer to the controlled sound source area for measuring the controlled sound information (col.2 ln.23-29); direct controlled sound measuring device (fig.2 #10) arranged nearer to the sound receiving area for measuring the controlled sound information (col.4 ln.19-30); a control sound source (fig.1,2 #9) for generating a control sound for reducing the controlled sound at a virtual controlled sound measuring position in the sound receiving area (col.4 ln.6-19); and controlled sound control device (fig.2 #12) for controlling the output of the control sound based on the output of the controlled sound measuring device (col.5 ln.47-57); wherein the controlled sound control device is operated based on a first sound transmission characteristic of the controlled sound source between the direct controlled sound measuring position and the virtual controlled sound measuring position (col.4 ln.19-30),

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and a second sound transmission characteristic of the control sound source between the direct controlled sound measuring position and the virtual controlled sound measuring position (col.4 ln.64-67, col.5 ln.1-28).

Yamashita does not disclose expressly wherein the device is arranged at the part of the wall having an opening.

Shepherd discloses a sound attenuation apparatus (fig.1A #2) wherein the apparatus is arranged at an opening (col.2 ln.65-68) in a wall (fig.1A #3).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to arrange the apparatus of Yamashita within an opening of the walls as described by Shepherd.

The motivation for doing so would have been to make the apparatus easily accessible for maintenance purposes.

With respect to claim 6, Yamashita discloses an active diffracted sound controller according to claim 5, wherein the controlled sound control device is operated alternately in a control section for generating a control sound and an identification section for producing a third sound transmission characteristic of the controlled sound source between the controlled sound source measuring device and the direct sound measuring device (fig.1 #5, col.4 ln.6-19).

With respect to claim 7, Yamashita discloses an active diffracted sound controller according to claim 5, wherein the sound source measuring device, the direct controlled

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sound measuring device and the control sound source are configured integrally and adapted to be arranged removably on the opening. It is implied that the components of Yamashita are installed after the construction of floor and ceiling (#20,23) and so they would be capable of being removed from their mounted positions.

With respect to claim 8, Yamashita discloses an active diffracted sound controller according to claim 5, wherein the control sound source is arranged at the upper end portion of the wall body (fig.2); and wherein the direct controlled sound measuring device is arranged within the distance of the shortest wavelength of the frequency of the controlled sound from the edge portion of the opening (col.4 ln.59-67, col.5 ln.1-3).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Marquiss (US 5,872,853) discloses a noise abatement device.

Kim (US 2001/0022847 A1) discloses a smart panel for decreasing noise in wide band frequency.

Gaudriot et al (US 6,463,156 B1) discloses an active device for attenuating the intensity of sound.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason R. Kurr whose telephone number is (571) 272-0552. The examiner can normally be reached on M-F 10:00am to 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571) 273-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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